Louisville and Jefferson County
Metropolitan Sewer District

400 South Sixth Street
Louisville, Kentucky 40202-2397

Mail To: P.O. Box 740011
Louisville, Kentucky 40201

502-540-6000

MSD

March 24, 1995

Ms. Liza I. Montalvo
Remedial Project Manager
Kentucky/Tennessee Section
U. S. EPA
Region IV
345 Courtland Street, N. E.
Atlanta, GA 30365

Re: Results of Air Quality Monitoring - FY 95 Second Quarter (FY95-2Q), (Event No. 9) Lees' Lane Superfund Site, Jefferson County, Kentucky Administrative Order on Consent, U. S. EPA Docket No. 91-32-C

Dear Ms. Montalvo:

In accordance with paragraph 11, under, Reporting Requirement, of the subject Consent Order and Attachment I, Operation and Maintenance Plan for Post-Removal Site Control at the Lees' Lane Landfill Site, Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following items, prepared by Radian Corporation, P. O. Box 13000, Research Triangle Park, North Carolina 27709, as received by MSD on March 19, 1995.

1. Radian Corporation letter, dated March 16, 1995, 2 pages.

2. Figure 1, Lees' Lane Landfill, Sampling Locations, 1 page.

3. Table 1, TO-14 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: 11/22/94, 1 page.

4. Table 2, On-Site Meteorological Data, 11/22/94 1 page.

5. Table 3, TO-14 Data Summary for Gas Monitoring Well Samples at Lee's Lane Landfill, Louisville, KY, Sampling Date: 11/22/94, 1 page.

Please advise if you have any questions concerning these sampling arrangements.
Sincerely,

Carl A. Netzmayer
Director of Operations

CAN/dc
CAN1-4U

cc: Mr. Jeff Pratt, KNREPC,
Division of Waste Management
Mr. Rick Hogan, KNREPC
Division of Waste Management
G. R. Garner, Executive Director
File: WD-2 (Lees' Lane M & M Quarterly)

MSD

Louisville and Jefferson County
Metropolitan Sewer District

Rec'd	by
For	
Route To	
Copies To	

Office
Memorandum

DATE: March 20, 1995

TO: Carl A. Neumayer

FROM: Dan R. Sammons

SUBJECT: Lees Lane Landfill Sampling Event #09

Attached, please find the results of the Ambient Air and Gas Well samples taken during the November 22, 1994 sampling event at the Lees Lane Landfill. These results represent the ninth sampling event at the site. I have organized the report as follows:

1. Radian Corporation letter, dated March 16, 1995, 2 pages.
2. Figure 1, Lees Lane Landfill Sampling Locations, 1 page.
3. Table 1, TO-14 Data Summary for Ambient Air Samples, 1 page.
4. Table 2, On-site Meteorological Data, 1 page.
5. TO-14 Data Summary for Gas Monitoring Well Samples, 1 page.

If you have any questions regarding the subject report, please advise.

DRS/sji
drs3.1d

RADIAN
CORPORATION

(Shipping) 1600 Perimeter Park Drive
Morrisville, NC 27560
(Mailing) P.O. Box 13000
Research Triangle Park, NC 27709
(919) 461-1100

March 16, 1995

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, Kentucky 40211

Dear Dan:

Enclosed is the summary analytical report for the ambient and gas monitoring well samples collected at the Lee's Lane Landfill site on November 22, 1994.

A map of the site, labelled with the sample collection locations for your reference, is shown in Figure 1. Table 1 is a tabular summary for the ambient sample with the primary analytes required for submission to EPA. All primary analytes are at typical ambient levels, except for toluene and xylene in downwind sample AS-A1.

The monitoring sites for this quarterly collection were chosen based on a combination of prevailing on-site meteorology and available sites in the adjacent residential neighborhood per the standard sampling protocol. It was sunny and cold for most of the monitoring day with a slight breeze in the afternoon. Hourly readings of wind speed and direction from an on-site source were recorded by LMSD personnel. The meteorological data is summarized in Table 2. The ambient samples were collected 3-5 feet above ground level. The ambient samples collected were integrated over a 7-8 hour collection period in Summa® canisters.

The methane analysis was performed by GC/FID on a separate analytical system prior to the TO-14 analysis at Radian's Perimeter Park Laboratory. The TO-14 analytical methodology using Gas Chromatography/Mass Spectrometry (GC/MS) was employed. Samples were handled with standard laboratory chain-of-custody procedures. Sample canisters and flow controllers were cleaned and blanked using Method TO-12 for total nonmethane hydrocarbons prior to field deployment. All ambient and gas well samples were successfully analyzed for methane and the TO-14 target analytes. No analytical difficulties were experienced with the gas well samples.

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. Each set of gas monitoring wells was screened with field monitors (OVA-128, combustible gas meter, and PhotoTip). The values for methane

were recorded by the OVA-128. The OVA values were used to select the wellhead (S or D) for collection of the canister sample.

The laboratory determined methane results are consistent for all the ambient air and the gas monitoring wells samples. The average ambient level of methane measured was 3.18 ppmv, while the methane level measured in the gas wells ranged from 2.36 to 3.46 ppmv. All field measurements from the OVA, Hnu, PhotoTip, and TMX were below the detection limit of each instrument. The laboratory determined methane values are higher than the field values due to the inherently greater analytical sensitivity. The laboratory measured methane results are consistent with results from the past sampling periods.

With the exception of the primary target analytes, very few TO-14 compounds were detected in either the ambient or gas well samples. Benzene, toluene, and xylene were detected in all 13 field samples. Methylene chloride was detected in the 6 ambient samples at normal levels.

Radian appreciates the opportunity to assist your staff with this project. Please advise me at (919) 461-1242 if you have any questions.

Sincerely,

Robert F. Jongleux
Project Director

RFJ/pjsj116

Attachments

cc: G.A. Holliden, Radian/LOU
Jay A. Snyder, Radian/RTP

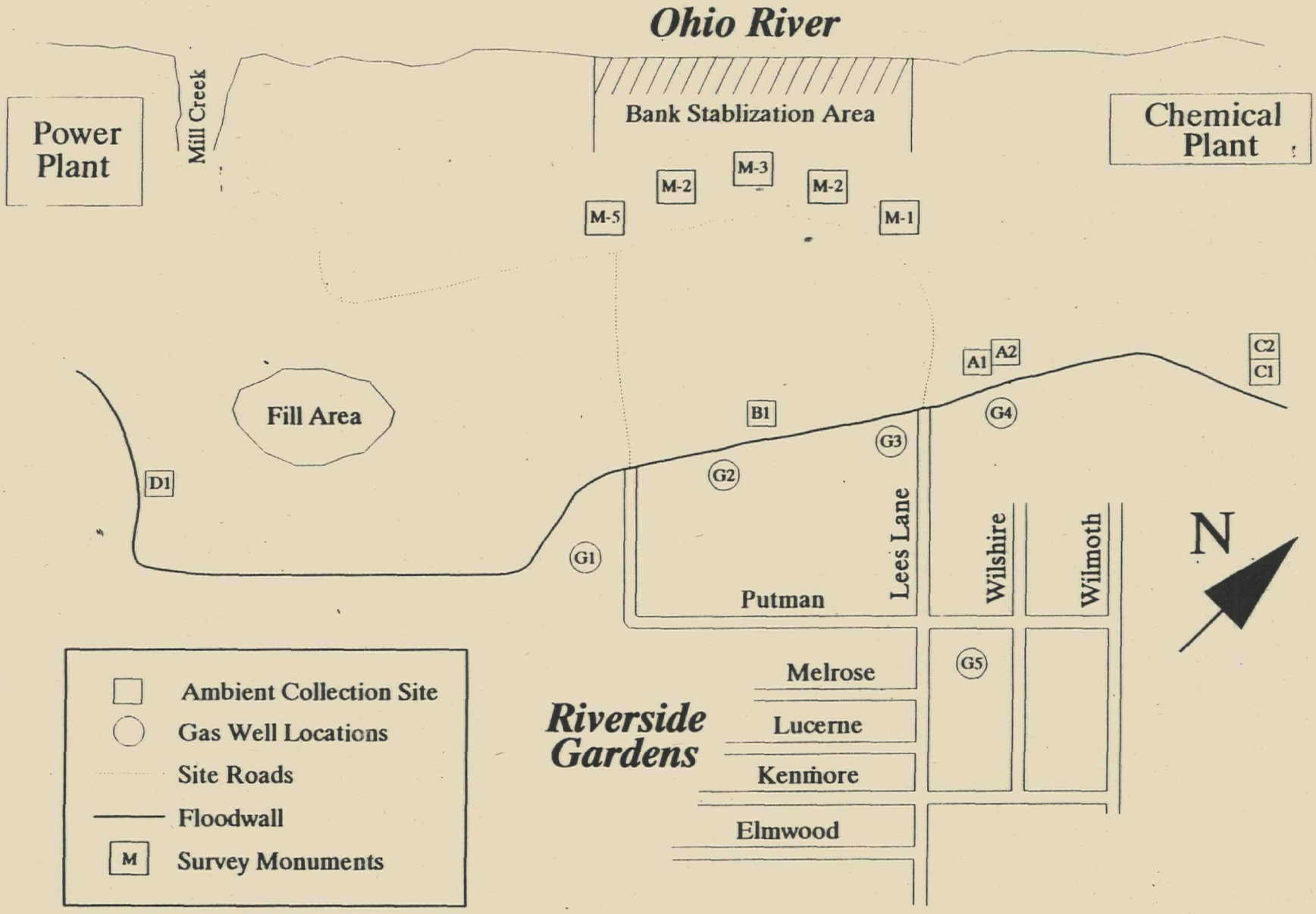

Figure 1. Lees Lane Landfill Sampling Locations

Not to scale.

TABLE 1

TO-14 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEES'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: 11/22/94

Sample ID	AS-U1	AS-A1	AS-A2	AS-R1	AS-R2	AS-R3
Canister ID	A141752	A127734	A127724	A167612	A127721	A141750
Location	Upwind	Downwind	Downwind	Residential	Residential	Residential
Dilution Factor	.8444	.9189	.8779	.9083	.8089	.9212
Compound (conc. in ppbv)						
Benzene	0.20	2.67	0.18	0.18	0.57	0.49
Toluene	0.21	10.03	0.17	0.21	1.79	0.92
Xylene (total)	0.23	13.79	0.15	0.16	2.09	1.07
Methylene Chloride	0.11	0.79	0.07	1.28	0.57	0.07
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methane (ppm)	2.77	3.33	3.34	3.11	3.41	3.14

Note: less than values indicate compound was at or below the analytical detection limit.

TABLE 2

ON-SITE METEOROLOGICAL DATA
NOVEMBER 22, 1994

Time	Barometric Pressure (in Hg)	Humidity (%)	Wind Direction From	Wind Speed (mph)	Observations
830	30.10	69	310°	<1	Sunny
900	30.19	63	330°	2	Sunny
930	30.19	60	330°	2	Sunny
1000	30.19	54	330°	3	Sunny
1030	30.19	54	310°	1	Sunny
1100	30.21	46	320°	3	Sunny
1130	30.24	44	300°	2	Sunny
1200	30.22	40	350°	3	Sunny
1230	30.23	37	310°	3	Sunny
1300	30.21	32	290°	1	Sunny
1330	30.21	29	280°	2	Sunny
1400	30.21	27	290°	6	Sunny
1430	30.21	26	310°	2	Sunny
1500	30.20	29	340°	3	Partly Cloudy
1530	30.20	31	310°	2	Partly Cloudy
1600	30.27	28	270°	1	Partly Cloudy
1630	30.22	30	280°	1	Party Cloudy
1700	30.29	32	290°	2	Party Cloudy

** Compiled by LMSD personnel at Lee's Lane Landfill Site **

TABLE 3

TO-14 DATA SUMMARY FOR GAS MONITORING WELL SAMPLES AT THE LEE'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: **11/22/94**

Sample ID	AS-G1D	AS-G2D	AS-G3S	AS-G4S	AS-G5NV	AS-G5N	FBL
Canister ID	A127727	A127732	A127729	A127733	A141754	A141767	A141762
Dilution Factor	.8450	.8762	.9075	.8985	.8785	.8785	1
Orifice	D-B1	D-33	D-6	D-104	D-8	D-3	--
Compound (conc. in ppbv)							
Benzene	0.17	0.21	0.06	0.91	0.18	0.31	0.01
Toluene	0.21	0.24	0.09	3.54	0.27	0.75	0.02
Xylene (total)	0.16	0.22	0.11	4.80	0.23	0.70	0.01
Methylene Chloride	0.07	0.06	0.02	0.33	0.06	0.09	<0.50
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methane (ppm)	3.28	3.46	2.36	2.90	2.94	2.90	ND

Note: Less than values indicate compound was at or below the detection limit